

Appl. No. 09/929,030  
Response dated August 24, 2005  
Reply to Office Action of May 17, 2005

#### REMARKS

Reconsideration and allowance of the above-identified application are respectfully requested. Claims 1-26 remain pending.

Applicants appreciate the Examiner's allowance of claims 15, 16, 23 and 25, and the indication that dependent claims 3-5, 10-12, 18, 19, 21 and 22 include allowable subject matter.

However, claims 1, 2, 8, 9, 17 and 20 are now rejected under 35 U.S.C. § 103(a) as being unpatentable over the Chang patent, of record, in view of newly cited U.S. Patent No. 6,459,881 to Hoder et al. In addition, dependent claims 6, 7, 13 and 14 are now rejected under 35 U.S.C. § 103(a) as being unpatentable over the Chang patent in view of the Hoder patent and previously cited Beason patent. These rejections are respectfully traversed.

In particular, as discussed in more detail below, Applicants respectfully submit that none of the cited patents teaches or suggests a mobile access point, for use with a *packet-switched communication network*, such that the mobile access point is adapted to transmit and receive communications signals to provide a wireless user terminal with access to the network *while the mobile access point is moving*. Rather, as discussed in the previous Response, the Chang patent teaches a fixed cellular system, and techniques for allocating a set of PN codes to the base stations in the system, and the Beason patent teaches the integration of a GPS receiver into a cell phone so that the cell phone can report its location by either displaying the location locally or using the cell phone network to allow the location to be displayed remotely. The newly cited Hoder patent fails to make of for the deficiencies in the teachings of the Chang and Beason

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patents because Hoder merely teaches a cellular radio network in which a *repeater*, not an access point, moves from cell to cell.

The rejections will now be discussed individually in detail.

The 35 U.S.C. § 103(a) Rejection Based on the Chang and Hoder Patents

In this rejection, the Examiner contends that the Chang patent teaches the use of a mobile access point as recited in the rejected claims. In particular, the Examiner again refers to vehicle 504 of Figure 9 and its related description beginning at column 9, line 53. The Examiner further contends that the vehicle 504 can move slowly at short distances and still maintain its microwave link. Therefore, the Examiner concludes that the vehicle 504 meets the "mobile access point" of the present invention as claimed. Applicants respectfully disagree.

Specifically, as discussed in the previous Response, rejected independent claims 1, 8, 24 and 26 define a mobile access point for use with a *packet-switched communication network*. Applicants respectfully submit that nowhere does the Chang patent teach or suggest that the cellular network is a packet-switched network. Applicants further respectfully submit that the Chang patent primarily teaches techniques for allocating a set of PN codes to the base stations in the fixed cellular system to thus effectively configure different frequencies over which neighboring cells can transmit. The Chang patent describes, for example, the use of a first and second set of PN codes, with the first set being used for the macro cellular network and the second set being used for an underlay network that is added to increase capacity. The

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implication is that the underlay network is entirely within the coverage of the overlay network. Applicants respectfully submit that this is contrary to the purpose of the mobile access points as claimed, which is to provide access points that are freely mobile so that they can dynamically relocate to add coverage and/or capacity as dictated by environmental or traffic constraints of a *packet switched network*.

Furthermore, concerning the Examiner's conclusion that the vehicle 504 in the Chang system will be able to maintain its link if it moves slightly, Applicant respectfully submits that this possibility, but not certainty, of an otherwise fixed *deployable* (not moving) base station to coincidentally maintain its link in very limited circumstances does not render that base station a "mobile access point" that provides a wireless user terminal with access to the network "while the access point is moving". In other words, Applicants submit that one skilled in the art would interpret the term "mobile access point," in view of the context of the present application, to be deemed "mobile" because it has this ability to maintain communication while it is freely moving, not simply because it is intended to be deployed to a fixed location and can potentially still operate within a certain tolerance level of limited incidental movement.

Turning now to the Hoder patent, Applicant respectfully submits that this patent teaches a repeater in a cellular radio network. Granted, the repeater can perform handoff operations when transitioning from one cell to another cell. However, Applicant respectfully submits that one skilled in the art would recognize fundamental differences between a "repeater" of a cellular network and an "access point" of a packet switched communication network according to the

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claimed embodiments of the present invention. In particular, as understood in the art, a "repeater" receives a signal and regenerates that identical signal, where an "access point" receives a packet and retransmits a packet which can be different from the received packet. That is, although the contents of the retransmitted packet may be the same as that of the received packet, the routing information, header, channel information and other characteristics may be changed due to the nature of the packet switching access point.

Applicant further submits that as can be appreciated by one skilled in the art, it is well known in the cellular industry that one significant drawback associated with a "repeater" is that a repeater generally will consume a significant amount of spectrum because a repeater regenerates the same signal and thus requires twice as many channels to be utilized. This spectrum use generally will not adversely affect communications when the network is sparse, but can have a dramatic effect on the efficiency of a dense network. On the contrary, a "router" does not require the use of additional channels to forward packets because a router generally makes a routing decision on a packet by packet basis, and can decide to drop a packet, forward the packet on the same channel, and so on.

Furthermore, as understood by one skilled in the art, the repeaters as described in the Hoder patent are "tethered," meaning that the repeater can move as long as it can maintain communication with the cell site. On the other hand, a mobile router does not need to maintain a connection to a base station or cell site, but rather, due to the self-healing nature of the network

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in which the router is deployed, the router can communicate packets with other devices in the network as it is moving.

Accordingly, for all these reasons, Applicant respectfully submits that one skilled in the art would not have been motivated, nor have found it possible, to combine the teachings of the Chang and Hoder patents to achieve the embodiments of the present invention even as defined in independent claims 1 and 8. Hence, all claims should be allowable.

The 35 U.S.C. § 103 Rejection Based on the Chang, Hoder and Beason Patents

In this rejection, the Examiner admits that the Chang and Hoder patents fail to teach or suggest the location determining features as recited in dependent claims 6, 7, 13 and 14. However, for this feature, the Examiner relies on the teachings relating to the portable GPS/radio unit set forth in the Beason patent, and contends that one skilled in the art would have found it obvious to modify the base station in the Chang/Hoder system to include the GPS features.

Applicants respectfully submit that as discussed above, no motivation exists to combine the teachings of the Chang and Hoder patents. In addition, the Beason patent has no relevance to the Chang or Hoder patents or to the present invention. Rather, the Beason patent teaches the integration of a GPS receiver into a cell phone so that the cell phone can report its location by either displaying the location locally or using the cell phone network to allow the location to be displayed remotely. The Beason patent has no relation to a system for providing increased

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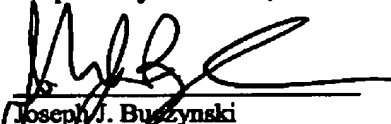
coverage or capacity within the network, and especially has no relation to a packet switched network as recited in the claims of the present application.

Claims 6, 7, 13 and 14 of the present application recites that the mobile access is capable of determining its location. However, Applicants submit that the GPS technology taught by the Beason patent that relates to a cell phone has no relationship to a "mobile access point" as recited in the claims of the present application, or even to the base stations as described in the Chang patent or the repeater described in the Hoder patent. Therefore, Applicants respectfully submit that one skilled in the art would not have been motivated to modify even the base stations taught by the Chang patent or the repeater taught by the Hoder patent in view of the teachings of the Beason patent. However, even if such motivation did exist, the teachings of the Beason patent fail to make up for the deficiencies in the teaching of the Chang and Hoder patents with regard to the mobile access points as discussed above. Hence, Applicants submit that rejected independent claims 1, 8, 24 and 26, and all dependent claims, should be allowable over the Chang, Hoder and Beason patents.

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In view of the above, it is believed that the subject application is in condition for allowance, and notice to that effect is respectfully requested. However, should the Examiner have any questions, he is invited to contact the undersigned at the number indicated below.

Respectfully submitted,

  
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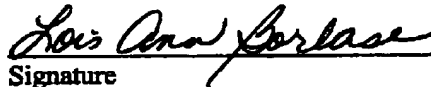
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CERTIFICATE OF FACSIMILE TRANSMISSION

I hereby certify that this Response (along with any documents referred to as attached or enclosed) is being transmitted by facsimile to the United States Patent and Trademark Office, Attention: Examiner Ronald B. ABELSON, Art Unit 2666, Facsimile Number 571-273-8300, on the date indicated.

Lois Ann Borlase  
Printed Name

  
Signature

Date: August 24, 2005

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